



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,380	09/16/2003	Gary Gray	3/1124US(2)	1614
22822	7590	07/27/2007	EXAMINER	
LEWIS, RICE & FINGERSH, LC			MATHEW, FENN C	
ATTN: BOX IP DEPT.			ART UNIT	PAPER NUMBER
500 NORTH BROADWAY			3764	
SUITE 2000				
ST LOUIS, MO 63102				
MAIL DATE		DELIVERY MODE		
07/27/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/663,380	GRAY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Fenn C. Mathew	3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 May 2007.
- 2a) This action is **FINAL**.                                   2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
  - 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6 and 8-32 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 5-6, 8-10, 11-12, 16-21, 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Green et al. (U.S. 5,391,130). Green discloses a frame, a first footpad connected to the frame so as to rotate along a first path in a first direction about a first drive axis, a second footpad connected to the frame so as to rotate along a second path in a second direction about a second drive axis, and a resistance mechanism attached to the frame, the resistance mechanism effecting the rotation of the first footpad along the first path and the rotation of the second footpad along the second path, wherein the second path is non-parallel to the first path and wherein the first footpad and the second footpad each move independently of the motion of the other. Note that the first and second foot pad are capable of pivoting, (as noted in the figures), and therefore are capable of maintaining a generally parallel relationship at all points of the first and second path respectively. Referring to claim 2, Green teaches the resistance mechanism resists rotation of the first footpad along the first path, and

rotation of the second footpad along the second path. Referring to claim 5, Green discloses the first drive axis parallel to the second drive axis. Referring to claim 6, Green discloses the first drive axis is not co-linear with the second drive axis. Referring to claim 8, Green teaches the first path being a mirror image of the second path. Referring to claim 9, Green teaches a device wherein the first path when viewed from a fixed location comprises rotation in a clockwise direction while the second path when viewed from the fixed location comprises rotation in a counterclockwise direction. As broadly claimed, referring to claim 10, Green discloses a control panel including a knob (82) for adjusting the resistance. Referring to claim 11, Green discloses the frame including a base and vertical support. Referring to claim 12, Green discloses the vertical frame including handgrips. Referring to claim 16, Green discloses the first path coplanar with the second path. Referring to claim 17, Green discloses the first and second footpad rotationally mounted to an arm and each of the arms rotates about the appropriate drive axis. Referring to claim 18, as best understood, Green discloses an arm that extends as the first foot pad traverses the first path. Referring to claim 19, Green discloses each of the first and second footpad rotationally mounted to a link and each of the links rotates about a link axis. Referring to claim 20, Green discloses the link and the arm work together to maintain the angle of the footpads relative to the horizontal. Referring to claim 21, Green discloses a device wherein the footpad retains a constant angle to the horizontal while rotating along the first path. Referring to claim 25, Green discloses, as best understood, a device wherein the user may adjust the speed of their motion to increase difficulty of exercise (inherently going faster requires

exertion of greater effort and thus increased difficulty). Referring to claim 26, Green teaches the limitations which are substantially similar and have thus been addressed in the claims above. Note above rejections.

3. Claims 27-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Green. Green discloses a method of exercising comprising providing an exercise machine including a frame, a pair of footpads moveably mounted on the frame so that each of the footpads can move independently of one another, placing a foot on the first and second footpads, and moving the first human foot and the second human foot interchangeably in a manner so planes created by the toe, heel, and calf of each foot are both translated relatively simultaneously along a path non-parallel to the planes, but at the same time teaches footpads that can rotate in order to allow the footpads to remain in a . Green does not specifically disclose visualizing a first and second plane, however, to the extent that Green does not, such visualization occurs in the mind and thus would be obvious to one performing exercise. Referring to claims 28-32, Green discloses a device allowing translation along an arcuate or linear path, with the path having a component perpendicular to at least one of the planes. Green further discloses planes that are parallel at the starting position, with translation of the planes being coplanar.

4. Claims 1, 4, 8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Gresko. Gresko discloses a frame, a first footpad connected to the frame so as to rotate along a first path in a first direction about a first drive axis, a second footpad connected to the frame so as to rotate along a second path in a second direction about

a second drive axis, and a resistance mechanism attached to the frame, the resistance mechanism effecting the rotation of the first footpad along the first path and the rotation of the second footpad along the second path, wherein the second path is non-parallel to the first path and wherein the first footpad and the second footpad each move independently of the motion of the other. Gresko further teaches the footpads maintaining a parallel relationship. Referring to claims 4, Gresko discloses the first and second drive axis arranged substantially horizontally. Referring to claim 8, Gresko teaches the first path being a mirror image of the second path. Referring to claim 10, Gresko discloses the first and second path including motion which is vertically downward.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Bond et al. (U.S. 4,601,468). Green teaches the claimed invention except for a resistance mechanism that will brake when the drive shaft reaches a maximum velocity. Bond teaches the desirability of such a feature. It would have been obvious to one of ordinary skill in the art to provide Green with a velocity dependent braking system as

taught by Bond in order to act as a safety mechanism and prevent injury from excessive speed during exercise.

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Wolfe (U.S. 4,120,294). Referring to claims 14 and 15, Green teaches the claimed invention except for a mechanism for collecting physiological data. Wolfe teaches a heart rate monitor that can be worn during exercise. It would have been obvious to one of ordinary skill in the art to provide a user of the Green exercise device with the heart rate monitor as taught by Wolfe in order to collect heart rate data. Furthermore, data collected could be used to alter exercise routines, and thus the operation of the exercise equipment.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Jerome (U.S. 5,242,340). Green teaches the claimed invention except for electromagnetic resistance. Jerome teaches in analogous device that electromagnetic resistance can be used as a substitute for hydraulic resistance. Based on the teachings of Jerome it would have been obvious to one of ordinary skill in the art at the time of invention to substitute electromagnetic resistance for hydraulic resistance, as an art recognized alternative.

9. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Jerome as applied to claim 22 above, and further in view of Webb (U.S. 5,749,807). The modified Green teaches the claimed invention except for the electromagnetic resistance comprising an eddy current brake on the drive shaft. Webb teaches the desirability of having the electromagnetic resistance comprise an eddy

current brake on the drive shaft. It would have been obvious to one of ordinary skill in the art to provide the modified Green with an eddy current brake on the drive shaft as taught by Webb in order to better affect resistance.

### ***Response to Arguments***

10. Applicant's arguments filed 05/01/2007 have been fully considered but they are not persuasive. With respect to Green, Applicant has argued that Green fails to teach a continual parallel relationship. Examiner respectfully notes that Applicant has claimed a generally parallel relationship, thus precluding the requirement for a complete parallel nature. Regardless, the pivotal nature of the footpads of Green allows for the footpad to maintain a generally parallel relationship. Applicant's arguments against the Green reference hinge more on the manner in which the device is used rather than the structural incapabilities of the device. The structure of Green does not preclude a continual generally parallel relationship. With respect to Applicant's arguments regarding Gresko, Examiner is unconvinced. Applicant argues that because of the lock block of Gresko, Gresko lacks independent movement. Examiner respectfully disagrees, as the lock block is merely used to lock the footpads in a parallel orientation. The device does not require use of the lock block, and hence each of the pad can move independently.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fenn C. Mathew whose telephone number is (571) 272-4978. The examiner can normally be reached on Monday - Friday 9:00am - 5:30pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



F.C. Mathew  
July 22, 2007